ends of each row, receptacle positions 1 and 120 being located at opposite ends of each row, and receptacle positions 60 and 61 being located at opposite ends of each row.

REMARKS

Status of the Claims

The Office Action dated July 31, 2002 has been received and its contents carefully considered. Claims 1-15 are pending. Claims 1-5, 12 and 13 have been withdrawn from consideration. Claims 6-11, 14 and 15 have been rejected. Claims 6 and 14 have been amended. Claim 15 has been cancelled. Claim 16 has been added.

Reconsideration and withdrawal of the outstanding rejections are respectfully requested in view of the following remarks.

Office Action

Claims 6-11 and 14-15 were rejected under 35 U.S.C. §103(a) as being unpatentable over Shibasaki et al. (U.S. Patent 5,684,673) in view of Tsukada et al. (U.S. Patent 5,864,463). Without conceding the propriety of the rejections, independent claim 6 has been amended. The amended claim obviates over the cited prior art because it does not teach at least the features of the "receptacles configured to correspond to a pin in the hardware interface port" including "the receptacles further forming two rows in parallel such that each receptacle is positioned to be numbered corresponding to its position in one of the rows" and further including the claimed receptacle positions 1 through 60 and 61 through 120.

Shibasaki et al. disclose a box body 2 containing a computer system 1 which is inserted into a cavity casing 16. A first connector, 13, is disposed on a rear surface 4B of the box body 2.

The Examiner states that the hardware interface connector 13 is "positioned within the interior portion of the housing". However, upon further inspection of Shibasaki et al., the first connector 13 is described in column 6, lines 33-34, as being "disposed on the rear surface 4B of the box body 2" which is further evidenced in FIG. 5. The claims of the present invention require that the hardware interface connector be positioned **within** the interior portion of the housing to be accepted by a hardware interface port of the portable display device. Tsukada et al. does not cure the deficiencies of Shibasaki et al. because it, too, does not teach at least the hardware interface connector positioned within the interior portion of the housing.

The Examiner also states that Tsukada et al. teaches a 120 pin connector 24 formed of two 60 pin rows. However, upon further review of the description of connection 24, Tsukada et al. describes the connector 24 as having "236 pins in two rows" (*e.g.*, see in column 6, line 13). The description of the pin configuration of the connector 24 beginning in column 10, line 3, also lacks a teaching of the 120 pin connector configuration. Both references are silent with regards to the receptacle configuration including the receptacle positions 1 through 60 and 61 through 120 as claimed in the instant invention.

In accordance with the M.P.E.P. §2143.03, to establish a *prima facie* case of obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re: Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974).* "All words in a claim must be considered in judging the patentability of that claim against the prior art." *In re: Wilson, 424 F.2d 1382, 1385, 165 USPQ 494 196 (CCPA 1970).* Since the prior art does not teach or suggest all of the claimed features, withdrawal of the rejection to claim 6 is respectfully requested.

The Examiner also concluded that the specific pin selection "would have been an obvious matter of design choice". The Examiner further states that "since Applicant has not disclosed

that any specific pin selection solves any stated problem or is for any particular purpose ...it appears that the invention would perform equally well with alternate pin selections dependent upon the interface". Applicant respectfully traverses this position for at least the following reasons. As discussed in the background of the invention (at page 1, line 25) "the prior art plug-in modules do not provide functionality to all types of electronic devices. For example, a plug-in module is not available that securely attaches to and interfaces with certain portable electronic devices having a 120 pin or 120 receptacle hardware interface port. If a module were available that could interface with such a portable electronic or computing device, the device could receive additional memory, software, features, hardware and functionality." "FIG. 1 illustrates an exemplary embodiment of the present inventive plug-in module for a portable electronic device" (page 6, lines 13-14). "The electronic apparatus includes a hardware interface port 4 such as a 120 pin or 120 receptacle connector to provide an interface between the plug-in module and the electronic device" (page 6, lines 20-22). "The plug-in module includes a memory or computer processor that adds functionality to the portable electronic device or the means to connect such a memory or processor to the device" (page 9, lines 4-5). In order to provide functionality, for example, to collect and analyze multiple aspects of an engine or vehicle including aspects of the vehicle operations such a emissions, components, system pressure, fluid pressure, system temperature, and other aspectual conditions (page 7, lines 2-4), the module needs to provide processing hardware that can be used by the electronic device when performing such functions (page 7, lines 8-9). The interface connector including between 1 and 120 receptacles is sized in position to receive and correspond to one or more pins of the hardware interface port on the portable electronic device (in accordance to the description on page 9, line 15 through page 10, line 19). Furthermore, the chart (beginning on page 10-11) illustrates the functionality of each

pin and corresponding receptacle in the hardware interface port and electronic connector. The aforementioned describes a stated problem and the claimed invention serves a "particular purposes" contrary to the Examiner's conclusion. The claimed invention's specific pin selections is **not** an obvious matter of design choice since the claimed inventions results in a structural difference which is, furthermore, patentably distinguishable from the prior art.

Independent claim 14 has been amended in a generally corresponding fashion to independent claim 6 and is patentable over the cited prior art for the same rationale as is claim 6. The prior art lacks a teaching of connecting the hardware interface within the interior portion of the housing including having between 1 and 120 receptacles, and configuring and forming the receptacles in the claimed manner.

Claims 7-11 depend from amended claim 6 and are patentable over the cited prior art for the same rationale as is claim 6.

Newly added claim 16 is written in a generally corresponding fashion as are claims 6 and 14 and is patentable over the cited prior art for the same rationale as are claims 6 and 14.

In view of the foregoing reconsideration and allowance of the application are believed in order and such application is earnestly solicited.

Should the Examiner believe that a telephone conference would expedite issuance of the application, the Examiner is respectfully invited to telephone the undersigned Patent Agent at 202-861-1538.

Respectfully submitted,

BAKER & HOSTETLER LLP

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Attachments:
Petition for Extension of Time
Appendix

Date: December 31, 2002

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APPENDIX

VERSION WITH MARKINGS SHOWING CHANGES MADE

IN THE CLAIMS

Claim 16 has been added.

Claims 6 and 14 have been amended.

6. (Amended) An apparatus for adding functionality to a portable electronic device, comprising:

a housing sized to be accepted by a housing port of a portable electronic device, the housing having an interior portions; and

a hardware interface connector positioned within the interior portion of the housing to be accepted by a hardware interface port of the portable electronic device, the hardware interface connector having between 1 and 120 receptacles, the hardware interface port having 120 pins;

[wherein each receptacle corresponds]said receptacles configured to correspond to a pin in the hardware interface port, [and wherein the] said receptacles [form]further forming two rows in parallel such that each receptacle is positioned to be numbered corresponding to its position in one of the rows, [and] wherein one of the two rows includes receptacle positions 1 through 60, the other of the two rows includes receptacle positions 61 through 120, receptacle positions 1 and 61 being located at corresponding ends of each row, receptacle positions 60 and 120 being located at corresponding ends of each row, receptacle positions 1 and 120 being located at opposite ends of each row, and receptacle positions 60 and 61 being located at opposite ends of each row.

14. (Amended) A method of adding functionality to a portable electronic device, comprising the steps of:

sizing a housing to be accepted by a housing port of a portable electronic device, the housing having an interior portion; [and]

connecting a hardware interface within the interior portion of the housing to be accepted by the hardware interface port of the portable electronic device, the hardware interface connection having between 1 and 120 receptacles, the hardware interface port having 120 pins;

configuring said receptacles to correspond to a pin in the hardware interface port; and

wherein said receptacles are arranged in two parallel rows such that each receptacle is positioned to be numbered corresponding to its position in one of the rows, wherein one of the two rows includes receptacle positions 1 through 60, the other of the two rows includes receptacle positions 61 and 120, receptacle positions 1 and 61 being located at corresponding ends of each row, receptacle positions 60 and 120 being located at corresponding ends of each row, receptacle positions 1 and 120 being located at opposite ends of each row, and receptacle positions 60 and 61 being located at opposite ends of each row.